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10/719,300	11/21/2003	Paul Masami Aoki	A1441-US-NP-9841-032	2108

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EXAMINER
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NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2629

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08/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/719,300	AOKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kevin M. Nguyen	2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/21/2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20,22-25,27,28 and 31-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20,22-25,27,28 and 31-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Arguments***

1. The amendment filed 5/21/2007 with respect to claims 1-14 and 31 which is NOT entered. The reason is as follows:

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-14 and 31-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

4. Claims 1-14 and 31-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Independent claim 1, two last lines recited the limitation "wherein each display section is operable to display images when in the expanded configuration and the display section is inoperable when collapsed." Independent claim 32, two last lines recited the limitation "wherein portions of the flexible display membrane are operable to display images when in the expanded configuration and are inoperable when in the

collapsed configuration.” Claim 33, two last line recited “wherein the display elements are operable to display image on the first and second areas when collapsed.” The above-identified limitation is not supported in the specification. Paragraphs 41 and 49, and the abstract especially recited “flexible display membranes are provided in various geometries in which a display area may be expanded to an operable position and collapsed to a smaller area for storage.” However, a display area is collapsed to a smaller area for storage. This statement would consider a display area is operable when collapsed in half way of folding/rolling.

How is the display section inoperable when collapsed completely or collapsed in half way?

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “*the flexible display membrane are inoperable when in the collapsed configuration*” in claims 1, 32, and 33 is used by the claim to mean “*whether collapsed completely or collapsed in half way,*” while the accepted meaning is “*wherein portions of the flexible display membrane are operable to display images when in the*

*expanded configuration.*” The term is indefinite because the specification does not clearly redefine the term.

7. Applicant’s argument/amendment filed 5/21/2007, with respect to amended claim(s) 1-20, 22-25 and 27, 28, and 31-33 under previous rejection have been fully considered and are not persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of Sawyer (US 6,762,929).

***Allowable Subject Matter***

8. The indicated allowability of claims 21 and 26 are withdrawn in view of the newly discovered reference(s) to Gomez (US 5,950,241) and Chang et al (US 6,297,838).

Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

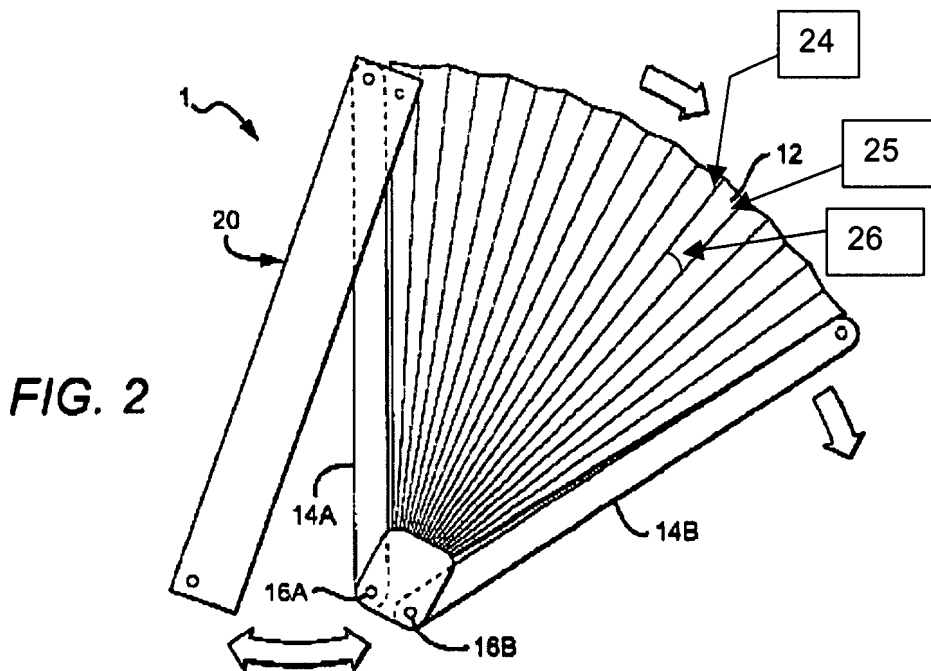
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over DuBois (US 6,793,460) and Sawyer (US 6,762,929).

11. As to claim 1, DuBois teaches a fan-shaped display between an expanded configuration with a greater visible area and a collapsed configuration with a smaller visible area [see Figs. 1 and 2], the collapsible display comprising:

at least three collapsible sections [at least three folded display portions 12, Fig. 2], including at least one display section [it is noted that the folded display portions 12

also be made luminous by incorporating LED(s) display device or other devices, see col. 4, lines 1-2], coupled such that when the collapsible display is in the expanded configuration [when the fan-shaped display is unfolded, see Fig. 4], each of the collapsible sections [12] has a first end [24<sup>i</sup>] adjacent to another of the collapsible sections [12], the adjacent ends substantially aligned along an axis each display section [12] further has a second end [25<sup>i</sup>] that is substantially opposite to the first end [24<sup>i</sup>] and substantially oblique relative to the first end [two line segments, e.g., the combination of the first end [24<sup>i</sup>] and the second end [25<sup>i</sup>] forms an acute angle, see Fig. 2, col. 3, lines 9-44 for further details of the explanation].



Accordingly, DuBois teaches all of the claimed limitation, except for the display section having addressable display element to form an image, wherein each display

section is operable to display images when is the expanded configuration and the display section is inoperable when collapsed.

As modified by Sawyer reference, Sawyer teaches the deficiencies of DubBois in which a related collapsible display comprises a flexible display (100) including a plurality of discrete elements being addressed by image (e.g., text and graphics as the image being displayed, see col. 5, lines 53-60). A flexible panel display 504 includes an extension apparatus 506 comprised of one or more extension members 508 coupled to flexible panel display 504 for supporting the display 504 in a viewing position when extended (fig. 18). When flexible panel display 502 is not in use, the extension members 508 may be pivoted to a collapse position (col. 8, lines 20-34).

12. As to claim 2, DuBois further teaches the collapsible display of claim 1, further comprising a pivot [16A, Fig. 2] to which each display sections [12] is connected and about which each display section [12] can rotate [see col. 3, lines 30-44 for details of the operation].

13. As to claim 3, DuBois further teaches the collapsible display apparatus of claim 2, wherein at least one of the display sections [12, Fig. 2] is rotatable between: a first position [a closed position] about the pivot [16A] in which the display section [12] overlaps significantly with another of the display sections [12] such that the display sections [a plurality of display sections 12] occupy the smaller visible area [see Fig. 3], and a second position [an open position] about the pivot [16A] where the display sections [the plurality of display sections 12] occupy the greater visible area [see Figs. 1-3, col. 3, lines 9-44 for further details of the operation].

14. As to claim 4, DuBois further teaches the apparatus of claim 2, wherein at least one of the display sections [12] is rotatable between a first position [a closed position] about the pivot [16A] in which the collapsible display [12] occupies the smaller visible area [the closed position of the fan-shaped display], and a second position [an open position] about the pivot [16A] where the collapsible display [12] occupies the greater visible area [the open position of the fan-shaped display, see Figs. 1-3, col. 3, lines 9-44 for further details of the operation].

15. As to claim 5, DuBois further teaches the display apparatus of claim 1, comprising a hinge element [24<sup>i</sup>, Fig. 2] for enabling the display sections [12] to rotate on an axis; two opposing panels [12]; an additional hinge element [25<sup>i</sup>, Fig. 2] for connecting adjacent sides of the two opposing panels and further for allowing the two opposing panels to rotate between an open position and a closed position, wherein the display sections [12] are coupled to the two opposing panels such that the display sections [12] are collapsed when the two opposing panels are in the closed position and the display sections are expanded when the two opposing panels are in the open position [see col. 3, lines 9-44 for further details of operation].

16. As to claims 6 and 7, DuBois further teaches the display apparatus of claim 1 and 6, comprising a section of a flexible display membrane secured to each of the display sections, and said display membrane comprising an electric paper [it is also contemplated that some fans may be made luminous by incorporating one or more lights, LED(s) display device or other devices, see col. 3, line 63 -- col. 4, line 2. Thus,



the fan portion (1) has an electric paper corresponding to a flexible display membrane as claimed].

17. As to claim 8, DuBois further teaches the display apparatus of claim 6, comprising an electronic device for providing display instructions to the display membrane [see col. 3, lines 45-62 for further details of the explanation].

18. As to claim 9, Sawyer teaches the display apparatus of claim 8, said electronic device comprising at least one of: a portable computing device, a television, a wireless communication device, a cellular telephone, a satellite telephone, a display controller, a wireless receiver and a personal digital assistant, col. 3, line 62 through col. 4, line 9.

19. As to claim 10, Sawyer teaches the collapsible display comprising a flexible display (100) including a plurality of discrete elements being addressed by image (e.g., text and graphics as the image being displayed, see col. 5, lines 53-60).

20. As to claim 11, DuBois further teaches the display apparatus of claim 8, wherein the display section extends from one of: a side [14A, Fig. 2] and a corner [15, Fig. 1] of the electronic device [see Fig. 2, col. 3, lines 30-44 for further details of the operation].

21. As to claim 12, DuBois further teaches the apparatus of claim 8, wherein the collapsed display membrane is at least partially retractable into a body of the electronic device [the fans-shaped is in the closed and open positions, see Figs. 1-7, cols. 3 and 4, for further details of the explanation].

22. As to claim 13, Sawyer further teaches the collapsible display comprising a flexible display (100) including a plurality of discrete elements being addressed by image (e.g., text and graphics as the image being displayed, see col. 5, lines 53-60).

*(the electronic flexible display 100 is a display layer; the image makes up of the plurality of pixels).*

23. As to claim 14, Sawyer further teaches the display apparatus of claim 13, the display membrane further comprising a control layer for addressing the plurality of pixels *[a computer system 200 controls driving display and addressing all the pixels on the flexible screen, see col. 5, lines 52-60].*

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify DuBois to have “the flexible display 100 includes text and graphics as the image being displayed. A flexible panel display 504 includes an extension apparatus 506 comprised of one or more extension members 508 coupled to flexible panel display 504 for supporting the display 504 in a viewing position when extended (fig. 18). When flexible panel display 502 is not in use, the extension members 508 may be pivoted to a collapse position” as taught by Sawyer. The motivation for doing so would apply to any electronic display with retractable flexible display having an integral, extendable support apparatus, while allowing the flexible panel display to be at least partially rolled upon itself and stored when is not in use (col. 1, lines 50-51, and col. 4, lines 1-8 of Sawyer).

24. Claims 15-19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gomez (5,950,241) in view of Chang et al (6,297,838) hereinafter Chang.

As to claim 15, figures 5A, 5B and 5C of Gomez teach a collapsible display deformable between an expanded configuration with a greater visible area and a collapsed configuration with a smaller visible area, the collapsible display comprising:

a flexible display membrane (18) having addressable display elements, and at least one support member (16) connected to the flexible display membrane, for supporting a portion of the flexible display membrane during an out-of-plane deformation; and

a deformable rim (16) forming an outer periphery of the flexible display membrane (18), wherein the at least one support member (16) is secured to positions along the deformable rim (16) and the, deformable rim (16) is biased to allow a section of the flexible display membrane (18) to be twisted about at least one axis to form the collapsed configuration and untwisted about the at least one axis form the expanded configuration, col. 8, line 58 through col. 9, lines 17.

Gomez fails to teach a flexible display membrane having addressable display elements. As modified by Chang reference, Chang teaches the deficiencies of Gomez in which a twisted display<sup>195</sup> (fig. 10) is twisted about the center axis (col. 10, lines 6-17), and displays documents in either iconic (136) or textual display modes (fig. 4, col. 9, lines 5-17) (corresponding to a flexible display membrane having addressable display elements as recited in claim 15).

As to claim 16, Gomez further teaches a pivot, and each support member connected to the pivot about which the support member can rotate (see col. 9, lines 1-5).

As to claim 17, figures 5A, 5B, and 5C of Gomez further teach the display apparatus of claim 15, said at least one support member (16) is rotatable between a first position about the pivot (axial rotation), in which the portion of the flexible display

membrane [18] overlaps significantly with a second portion of the flexible display membrane [18] such that the flexible display membrane [18] occupies a smaller visible area, and a second position about the pivot in which the first and second portions of the flexible display membrane occupy a greater visible area.

25. As to claim 18, figures 5A, 5B, and 5C of Gomez further teach the display apparatus of claim 15, comprising two opposing panels [two display sections 18]; and a hinge element [axial rotation] for connecting adjacent sides of the two opposing panels and further for allowing the two opposing panels to rotate between an open position (fig. 5A) and a closed position (fig. 5C), wherein the flexible display membrane [18] is secured to the two opposing panels at a plurality of positions such that the at least one display section is collapsed when the two opposing panels are in the closed position and the at least one display section is expanded when the two opposing panels are in the open position (fig. 5A).

26. As to claim 19, figure 5A of Gomez further teaches the display apparatus of claim 15, wherein the at least one support member [16] is secured to positions along an outer periphery.

27. As to claim 22, Chang further teaches the display apparatus of claim 15, comprising an electronic device for providing display instructions to the display membrane [see col. 9, lines 11-16].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Gomez to have the twisted display<sup>195</sup> (fig. 10) is twisted about the center axis (col. 10, lines 6-17), and displays documents in either iconic (136)

or textual display modes (fig. 4, col. 9, lines 5-17) (corresponding to a flexible display membrane having addressable display elements as recited in claim 15) as taught by Chang, this would provide a powerful user interface to a computer, and extend the flexibility of the senseme based user interface by supporting computer control based on a "morpheme" input (col. 2, lines 19-33 of Chang).

28. As to **claim 23**, figures 5A, 5B and 5C of Gomez teach a display apparatus, comprising:

a display membrane (18) having addressable display elements and having at least one individually-deformable section, wherein when an individually-deformable section is collapsed, the collapsed section forms a first geometric configuration having a first area, and when the collapsed section is expanded, the expanded section forms a second geometric configuration having a second area greater than the first area: and a deformable rim (16) around the section of the display membrane (18), wherein the deformable rim (16) is biased to allow the section to be twisted about at least one axis to form a collapsed position and untwisted about the at least one axis to form a visual display area.

Gomez fails to teach a flexible display membrane having addressable display elements. As modified by Chang reference, Chang teaches the deficiencies of Gomez in which a twisted display 195 (fig. 10) displays documents in either iconic (136) or textual display modes (fig. 4, col. 9, lines 5-17) (corresponding to a flexible display membrane having addressable display elements as recited in claim 15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Gomez to have the twisted display 195 (fig. 10) displays documents in either iconic (136) or textual display modes (fig. 4, col. 9, lines 5-17) (corresponding to a flexible display membrane having addressable display elements as recited in claim 15) as taught by Chang, because this would provide a powerful user interface to a computer, and extend the flexibility of the senseme based user interface by supporting computer control based on a "morpheme" input (col. 2, lines 19-33 of Chang).

29. Claims 24, 25, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gomez in view of Chang as applied to claim 23 above, and further in view of DuBois.

30. As to claim 24, both Gomez and Chang teach all of the claimed limitation of claim 23, except for a plurality of support members for supporting the display membrane, each support member having a first end connected to a pivot point about which the support member may rotate to expand and collapse the at least one individually-deformable sections of the display membrane. As modified by DuBois reference, DuBois teaches the deficiencies of Gomez and Chang in which a fan-shaped display comprises a plurality of support members [14A and 14B] for supporting the display membrane [12], each support member [14A] having a first end connected to a pivot [16A] point about which the support member may rotate to expand and collapse the at least one individually-deformable sections of the display membrane (the open position of the fan-shaped display device, see Figs. 1-3, col. 3, lines 9-44).

31. As to claim 25, DuBois further teaches the display apparatus of claim 24, each of the expanded sections forming a fan-shaped display [a fan-shaped display (1) is in the open position for display area, which is made luminous by incorporating more lights, LED(s), or other devices, see Fig. 2, col. 4, lines 1-2].

32. As to claim 27, DuBois further teaches the display apparatus of claim 24, comprising: two opposing panels [a left and right display section 12 are symmetric to an axis 24, Fig. 2]; a hinge [24] for connecting adjacent sides of the two opposing panels [12] for allowing the two opposing panels [12] to rotate between an open position and a closed position; and a section of the display membrane [12] connected to at least one of the opposing panels, wherein the section [12] is deformed when the two opposing panels are in the closed position and the section is unfolded when the two opposing panels are in the open position to form a display area [the closed and open position of the fan-shaped display device, see Figs. 1-3, col. 9-44 for further details of the explanation]. Chang teaches the documents which display in either iconic (136) or textual display modes (fig. 4, col. 9, lines 5-17) (corresponding to a flexible display membrane having addressable display elements as claimed).

33. As to claim 28, DuBois further teaches the display apparatus of claim 24, comprising a display hub [15, Fig. 1] for connecting the at least one individually deformable section [12] of the display membrane; and at least one support member [14A] for expanded and collapsing the at least one individually-deformable section [12] between the first and the second geometric configurations about the hub [the closed and open position about the hub 15, see Figs. 1-3, col. 3, lines 9-44].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Gomez and Chang to become pivotable and foldable for the display fan device as taught by DuBois because this would improve visibility of fans by making at least portions of the fans reflective or luminous, a symbol, a word, and a phrase for using in the warning includes the following: stop, warning ped, pedestrian, and crossing (col. 1, lines 51-59 of DuBois). The motivation for doing so would apply any display device, and any type of bending, folding or twisting by a structure that noticeably alters its shape (see figures 4-12 of Chang, and figures 5A, 5B, and 5C of Gomez), and would incorporate any or other types of electronic display devices (see col. 4, lines 1-2 of DuBois).

34. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gomez in view Sawyer, and further in view of Comiskey et al (US 6,473,072).

The combination of Gomez and Sawyer teaches all of the claimed limitation of claim 1, except for said electronic device comprising a display wand for addressing the visual display elements of at least a portion of the display membrane.

However, Comiskey et al teaches a display wand [a scanning display device, see Figs. 15b, and 16a-16f] for addressing the visual display elements of at least a portion of the display membrane [an electronic paper, see col. 2, lines 51-60, and col. 17, lines 1-63 for further details of the explanation].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Gomez and Sawyer to have the scanning in the electronic flexible display as taught by Comiskey, because this would provide the



excellent contrast and brightness of the erasable drawing/markings/images being displayed on the electronic flexible display, while fabricating the lifetime issues [see Comiskey, col. 5, lines 14-18, and col. 13, lines 58-67].

35. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gomez in view of Chang as applied to claim 15 above, and further in view of DuBois.

Both Gomez and Chang teach all of the limitation of claim 15, except for a hub, wherein the at least one support member is connected to the hub at a first end and secured to positions along an outer periphery of the flexible display membrane at a second end such that each support member is rotatable between a first position about the hub where each support member is substantially parallel to each other and the flexible display membrane is collapsed to a smaller visible area and a second position about the hub where the flexible display membrane forms at least a portion of a visible area having a greater visible area. As modified by DuBois reference, DuBois further teaches the deficiencies of Gomez and Chang in which the flexible display apparatus comprises a hub [15, Fig. 1], wherein the at least one support member [14A] is connected to the hub [15] at a first end and secured to positions along an outer periphery of the flexible display membrane [12] at a second end such that each support member is rotatable between a first position about the hub [15] where each support member [14A and 14B] is substantially parallel [see Fig. 6] to each other [when the fan-shaped display is in the closed position], and the flexible display membrane [12] is collapsed to a smaller visible area and a second position about the hub where the flexible display membrane forms at least a portion of a visible area having a greater

visible area [when the fan-shaped display is in the open position, see Figs. 1-7, col. 3 and 4, for further details of the operation].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Gomez and Chang to have the hub (15) being pivotable and foldable for the flexible display device as taught by DuBois, because this would improve visibility of fans by making at least portions of the fans reflective or luminous, a symbol, a word, and a phrase for using in the warning includes the following: stop, warning ped, pedestrian, and crossing (col. 1, lines 51-59 of DuBois). The motivation for doing so would apply any display device, and any type of bending, folding, or twisting by a structure that noticeably alters its shape (see figures 4-12 of Chang, and figures 5A, 5B, and 5C of Gomez), and would incorporate any or other types of electronic display devices (see col. 4, lines 1-2 of DuBois).

36. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over DuBois and Sawyer as applied to claim 1 above, and further in view of Chang.

Both DuBois and Sawyer teach all of the limitation of claim 1, except for a deformable rim around the section of the display membrane, wherein the deformable rim is biased to allow the section to be twisted about at least one axis to form a collapsed position and untwisted about the at least one axis to form a visual display area. As modified by Chang reference, Chang teaches the deficiencies of DuBois and Sawyer in which a twisted display<sup>195</sup> (fig. 10) is twisted about the center axis (col. 10, lines 6-17).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify DuBois and Sawyer to have the twisted display 195 (fig. 10) is twisted about the center axis as taught by Chang, this would provide a powerful user interface to a computer, and extend the flexibility of the senseme based user interface by supporting computer control based on a "morpheme" input (col. 2, lines 19-33 of Chang).

***Claim Rejections - 35 USC § 102***

37. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

38. Claims 32 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Sawyer (US 6,762,929).

39. As to claim 32, Sawyer teaches a collapsible display deformable between an expanded configuration with a greater visible area and a collapsed configuration with a smaller visible area, the collapsible display comprising:

a flexible display membrane having addressable display elements (the documents display in either iconic (136) or textual display modes, fig. 4, col. 9, lines 5-17), and at least one support member (104) connected to the flexible display membrane, for supporting a portion of the flexible display membrane during an out-of-

plane deformation (fig. 1, col. 3, lines 38-65); and wherein portions of the flexible display membrane are operable to display images when in the expanded configuration and are inoperable when in the collapsed configuration (a flexible panel display 504 includes an extension apparatus 506 comprised of one or more extension members 508 coupled to flexible panel display 504 for supporting the display 504 in a viewing position when extended (fig. 18). When flexible panel display 502 is not in use, the extension members 508 may be pivoted to a collapse position, col. 8, lines 20-34).

40. As to claim 33, Sawyer teaches a display apparatus, comprising:

a display membrane (100) having addressable display elements (the documents display in either iconic (136) or textual display modes, fig. 4, col. 9, lines 5-17), and having at least one individually-deformable section (fig. 2), wherein when an individually-deformable section is collapsed (fig. 2), the collapsed section forms a first geometric configuration having a first area (fig. 2), and when the collapsed section is expanded (fig. 3), the expanded section forms a second geometric configuration having a second area (fig. 3) greater than the first area (fig. 2), and wherein the display elements are operable to display images on the first and the second areas (the documents display in either iconic (136) or textual display modes, fig. 4, col. 9, lines 5-17).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-20, 22-25, 27, 28, and 31-33 have been considered but are moot in view of the new ground(s) of rejection.

### Conclusion

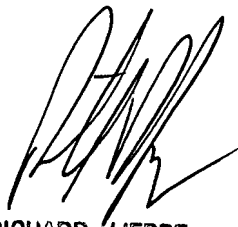
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Nguyen whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit 2629

KMN  
July 25, 2007

  
RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
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<sup>i</sup> It is respectfully submitted that in the case law stated "Drawing as a Reference", "Things clearly shown in reference patent drawing qualify as prior art features, even though unexplained by the specification". See *In re Mraz*, 173 USPQ 25 (CCPA 1972). "A claimed invention may be anticipated or rendered obvious by a drawing in a reference, whether the drawing disclosure by accidental or intentional. However, a drawing is only available as a reference for what it would teach one skilled in the art who did not have the benefit of applicant's disclosure". See *In re Meng*, 181 USPQ 94, 97 (CCPA 1974). "Absent of any written description in the reference specification of quantitative values, arguments based on measurement of a drawing are of little value in proving anticipation of a particular length". See *In re Wright*, 193 USPQ 332, 335 (CCPA 1977).